

What is claimed is:

CLAIMS

1 1. An illumination modulator correction system for adjusting the operational parameters of
2 an illumination modulator in an imaging system, said correction system comprising:
3 modulator pattern generation unit for providing a test pattern on the illumination
4 modulator;
5 modulator adjustment unit for permitting an actuation voltage on said illumination
6 modulator to be changed through a range of actuation voltage values;
7 a detector for receiving a modulated illumination field from said illumination modulator;
8 sampling unit for determining at least one sample value for at least one area of said
9 modulated illumination field; and
10 evaluation unit for determining a minimum sample value within said range of actuation
11 voltage values of said illumination modulator.

1 2. An illumination modulator correction system as claimed in claim 1, wherein said system
2 further includes adjustment unit for adjusting the actuation voltage of said illumination
3 modulator responsive to said evaluation unit.

1 3. An illumination modulator correction system as claimed in claim 1, wherein said
2 sampling unit determines three sample values for three areas of said modulated illumination
3 field.

1 4. An illumination modulator correction system as claimed in claim 3, wherein said
2 minimum sample value is determined at a rollover point for one of said sample values.

1 5. An illumination modulator correction system as claimed in claim 3, wherein said
2 minimum sample value is determined responsive to a second roller point for said sample values.

1 6. An illumination modulator correction system for adjusting the operational parameters of
2 an illumination modulator in an imaging system, said correction system comprising:
3 modulator pattern means for providing a test pattern on the illumination modulator;
4 modulator adjustment means for permitting an actuation voltage on said illumination
5 modulator to be changed through a range of actuation voltage values;
6 a detector for receiving a modulated illumination field in at least a first region from said
7 illumination modulator in a first direction;
8 sampling means for determining an average sample value for said at least one region of
9 said modulated illumination field; and
10 evaluation means for determining an optimal sample value within said range of actuation
11 voltage values of said illumination modulator.

1 7. An illumination modulator correction system as claimed in claim 6, wherein said system
2 further includes adjustment means for adjusting the actuation voltage of said illumination
3 modulator responsive to said evaluation means.

1 8. An illumination modulator correction system as claimed in claim 6, wherein said
2 sampling means determines three sample values for three regions of said modulated illumination
3 field.

1 9. An illumination modulator correction system as claimed in claim 8, wherein said optimal
2 sample value is determined at a rollover point for one of said sample values.

1 10. An illumination modulator correction system as claimed in claim 8, wherein said optimal
2 sample value is determined responsive to a second rollover point for said sample values.

1 11. An illumination modulator correction system as claimed in claim 8, wherein said optimal
2 sample value is determined responsive to a rollover point having a minimal energy value for said
3 sample values.

1 12. An illumination modulator correction system for adjusting the operational parameters of
2 an illumination modulator in an imaging system, said correction system comprising:

3 modulator pattern unit for providing a test pattern on the illumination modulator over a
4 first area in a first direction;

5 modulator adjustment unit for permitting an actuation voltage on said illumination
6 modulator to be changed through a range of actuation voltage values;

7 a detector for receiving a modulated illumination field in at least a first region, a second
8 region and a third region from said illumination modulator in said first direction;

9 sampling unit for determining an average sample value for each of said regions of said
10 modulated illumination field; and
11 evaluation unit for determining an optimal sample value within said range of actuation
12 voltage values of said illumination modulator.

1 13. An illumination modulator correction system as claimed in claim 12, wherein said system
2 further includes adjustment unit for adjusting the actuation voltage of said illumination
3 modulator responsive to said evaluation unit.

1 14. An illumination modulator correction system as claimed in claim 12, wherein said
2 optimal sample value is determined at a rollover point for a sample value in the central region of
3 said first area.

1 15. An illumination modulator correction system as claimed in claim 8, wherein said optimal
2 sample value is determined at a rollover point for one of said sample values.

1 16. An illumination modulator correction system as claimed in claim 8, wherein said optimal
2 sample value is determined responsive to a second rollover point for said sample values.

1 17. An illumination modulator correction system as claimed in claim 8, wherein said optimal
2 sample value is determined responsive to a rollover point having a minimal energy value for said
3 sample values.